UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

ACTION MEMORANDUM

SUBJECT: Request for Removal Action at Container Recycling
Wyandotte County, Kansas City, Kansas

FROM: Nelson Mix, P.E., On-Scene Coordinator
SUPR/EFLR

TO: Michael J. Sanderson, Director
Superfund Division

CERCLIS ID:	KSD065764995
SITE ID:	Z5
CATEGORY OF REMOVAL:	Time-Critical
NATIONALLY SIGNIFICANT:	No

I. PURPOSE

The purpose of this Action Memorandum is to request approval and funding for a time-critical removal action at the Container Recycling site, located at 1161 S. 12th Street in Kansas City, Kansas, in Wyandotte County. This proposed removal action will treat, remove, cap and cover soil and auto fluff contaminated with lead and other hazardous substances. This site is currently unoccupied and unsecured and poses a threat to the public health or welfare or the environment.

The proposed removal action will include clearing the site, treating and removing soil contaminated with high lead concentrations, and the preparation for, and installation of, a protective cover. The action also involves exploratory trenching for buried drums, and the removal of less than 100 intact, buried drums if found to contain hazardous substances. This removal action also includes the removal of partially full to full drums on the surface of the site.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

The Container Recycling site is about twenty acres in size. From the 1960s to the 1980s the site was utilized by a local scrap metal recycler to dispose of auto fluff. The site was used for drum reconditioning from 1965 until 1996. It operated as Sims Barrel Company until 1971, as Great Lakes Container until 1986, and then as Container Recycling. An involuntary Chapter 7 bankruptcy was initiated against Container Recycling in 1997 and is currently on-going. Process wastes and approximately 65,000 empty drums remain on-site.

In January 1997 a Phase I site assessment was conducted by an environmental consulting firm. In June 1997, a Phase II assessment was performed. The Kansas Department of Health and Environment (KDHE) conducted a Preliminary Removal Assessment in June 1997, and the Environmental Protection Agency (EPA) completed a Removal Assessment at the site in November 1998. KDHE sampling and analysis showed areas of contaminated soil, a sludge pond, and non-containerized wastes inside of the process building with hazardous substance contaminations at levels higher than Kansas Risk-Based Standards (RSK), for non-residential scenarios. The EPA Removal Assessment showed high levels of metals and polyaromatic hydrocarbons (PAHs) in soils across the site.

The site's key problem areas are the following:

1. The process building has containers of hazardous wastes inside, as well as contaminated ash, sludge, and shot from the drum reconditioning process.
2. There are above ground storage tanks (ASTs). The tanks contain muriatic acid, sulfuric acid, and caustics.
3. There is a sludge pit, a sludge pond, and a sludge trench with contamination.
4. The levels of heavy metals and PAHs in soils across the site are elevated above health based levels of concern.
5. There is testimony and geophysical testing data which indicates there may be buried drums on-site.

2. Physical Location

The property is located in the Armourdale District of Kansas City, Kansas. It is an industrial property surrounded by other industries, but within one-fourth mile of lower income residences. The property is fenced on one side and is approximately twenty acres in size. The levee to the Kansas River bounds the southern portion of the site. The site is located next to the Twelfth Street bridge.

3. Site Characteristics

No previous removal actions have been performed at the site. The property is currently unoccupied. Drums are stacked and/or scattered across the site. In addition there is debris from operations at the facility. There is dense brush across the site. Topographically, the site has very little relief. The depth to groundwater is about fifty feet and there are no known drinking water wells impacted by site contamination. The auto fluff ranges in depths from four to eighteen feet across the entire site.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Samples collected and analyzed by KDHE document the presence of lead, mercury, arsenic, benzo(a)pyrene, anthracene, benzo(a)anthracene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and tetrachloroethylene exceeding the levels of the RSK for non-residential soils. These are hazardous substances as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, 42 U.S.C. § 9601(14), and 40 C.F.R. § 302.4. One sample of ash from process wastes inside the building failed the Toxicity Characteristic Leaching Procedure (TCLP) for barium.

Many of the hazardous substances encountered by KDHE were co-mingled and co-located. EPA sampling confirmed KDHE results and showed lead to be the single most prevalent contaminant, consistently at concentrations well above the RSK and background. Through systematic grid sampling, the EPA data also showed the lead to be wide-spread across the site. The lead contamination concentrations range from 1,500 parts per million (ppm) to 21,000 ppm.

5. National Priorities Listing (NPL) Status

The site is not on nor is it proposed for inclusion on the NPL at this time.

6. Maps, Pictures and Other Graphic Representations

Site maps are included as Attachments 1 & 2.

B. Other Actions to Date

1. Previous Actions

Since Container Recycling ceased operations in 1996, a few companies have removed some of the empty drums from the property, through coordinated efforts with the EPA. Other than the private consulting firm, KDHE and EPA site assessment, sampling and fact finding activities, there have been no other actions at the site. To date, there have been no emergency response or removal actions initiated by the EPA.

2. Current Actions

EPA has signed a Prospective Purchaser Agreement (PPA) with Alliance Industrial Service (Alliance). Alliance is in the process of obtaining clear title to the property. Pursuant to the PPA, upon obtaining title to the property, Alliance also has the responsibility to dispose of all "Indoor Waste Containers", empty the ASTs, and remove the trailers and empty drums from the property. No work plans or schedules for these activities have been approved to date, nor has title to the property been secured. Alliance has until November 24, 1999, to secure the title to the property, otherwise the PPA becomes null and void. Should Alliance not perform the above-described work under the PPA, EPA would do so as part of this removal action.

Currently there is no activity on-site. The site is currently unoccupied.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

On July 11, 1997, the site was referred to the EPA by KDHE for evaluation as a candidate for a removal action. The state lacks the resources to conduct the necessary cleanup actions to address the hazards present at this site.

2. Potential for Continued State and Local Response

KDHE will likely monitor response activities at the site.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health, or Welfare, or the Environment

Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), authorizes EPA to respond whenever any hazardous substance is released or when there is a substantial threat of such a release into the environment. In determining whether there is a threat to public health or welfare or the environment, the site was evaluated using the eight criteria from the National Oil and Hazardous Substances Contingency Plan (NCP), 40 C.F.R. § 300.415 (b)(2). The following is a discussion of the criteria that apply to the site.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [40 C.F.R. § 300.415(b)(2)(i)]

Elevated concentrations of lead are present in soil at the site. The site is presently accessible to the public and there is evidence that homeless persons and other trespassers frequently visit and/or occupy the site. These persons may be exposed to lead and other hazardous substances. The site may be placed back into use, thereby exposing workers and others transacting business on the site to lead and other hazardous substances. The associated potential health-related effects of hazardous substances in soil across the site are summarized below:

Lead is a metal and a constituent of D008 hazardous waste. Humans may be exposed to lead through ingestion of contaminated water or soils or by inhalation of lead particles in the air. Lead has many toxic effects on human health and is classified by EPA as a probable human carcinogen. Lead is also a cumulative toxicant. The early effects of lead poisoning are nonspecific and difficult to distinguish from the symptoms of minor seasonal illnesses. The symptoms are decreased physical fitness, fatigue, sleep disturbance, headache, aching bones and muscles, digestive symptoms (particularly constipation), abdominal cramping, nausea, vomiting, and decreased appetite. With increased exposure, symptoms may include anemia, pallor, a "lead line" on the gums, and decreased handgrip strength. Alcohol ingestion and physical exertion may precipitate these symptoms. The peripheral nerve affected most frequently is the radial nerve. With prolonged exposure, this results in weakness in the hands and wrists. Central nervous system effects include severe headaches,

convulsions, coma, delirium, and possibly death. The kidneys can also be damaged after long periods of exposure to lead, with loss of kidney function and progressive azotemia. In women, exposure to lead has been associated with decreased fertility, increased rates of miscarriage and stillbirth, decreased birth weight, premature rupture of membrane, and/or pre-term delivery. Reproductive effects in men include erectile dysfunction, decreased number of sperm, abnormal sperm shape and size and reduced semen volume. Lead exposure is associated with increases in blood pressure and left ventricular hypertrophy. A significant amount of the lead that enters the body is stored in the bones for many years and can be considered an irreversible health effect.

Arsenic is classified as a carcinogen by the International Agency for Research on Cancer and is a CERCLA hazardous substance (some compounds), and a priority toxic pollutant by EPA. Acute arsenic ingestion generally produces symptoms within 30 minutes but may be delayed for several hours if ingested with food. Garlic-like odor of breath and feces may occur. Dehydration, intense thirst, vomiting, diarrhea, and fluid like-electrolyte disturbances are common. Arsenic compounds are primarily absorbed through the gastro-intestinal tract, but may be absorbed through the skin or by inhalation. Arsenic compounds are skin, eye, and mucus membrane irritants. Acute inhalation exposures have resulted in irritation of the upper respiratory tract. If injected, initial symptoms include burning lips, throat constriction, and dysphagia followed by excruciating abdominal pain, severe nausea, projectile vomiting, and profuse diarrhea. The delayed effects of arsenic ingestion include multi-organ failure by inhibiting sulfhydryl containing enzymes within cells. The primary target organs are the gastrointestinal tract, the heart, brain, and kidneys. Eventually the skin, bone morrow, and peripheral nervous system may be significantly damaged. Convulsions, coma, and death may follow within 24 hours of severe acute exposure.

Mercury is a CERCLA hazardous substance. Primary exposure routes to the public are through the food chain, inhalation of vapors, and absorption through the skin. The respiratory and central nervous systems can be adversely affected.

Benzo(a)pyrene, anthracene, benzo(a)anthracene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene are PAHs that can produce a variety of non-cancer effects with chronic exposure. However, cancer is the most significant PAH toxicity endpoint. Chronic effects include photosensitivity and irritation of the eyes, coughing, bronchitis, leukoplakia, erythema, dermal burns, aceniform lesions, hepatotoxicity, and hematuria.

Increased incidences of cancer of the skin, bladder, lung, and gastrointestinal tract have been described in PAH-exposed workers.

Tetrachlorethylene (PCE) is a man-made solvent and CERCLA hazardous substance. Repeated contact may cause dermatitis. Acute exposure may cause central nervous system depression, hepatic injury, and anesthetic death. Symptoms of overexposure include malaise, dizziness, perspiration, staggering, and slowing mental ability.

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release (40 C.F.R. § 300.415(b)(2)(iii)).

There is bulk storage on-site in the form of a sludge pit, sludge pond, and sludge trench. There are also partially full to full drums on-site, outside of the building. The number of partially full to full drums is unknown, but is estimated to be less than 100 drums. The drums are in poor condition. Additionally, there are three ASTs on-site, containing muriatic acid, sulfuric acid, and caustics.

High levels of hazardous substances in soils largely at or near the surface, that may migrate [40 C.F.R. § 300.415 (b)(2)(iv) and (v)].

EPA surface soil sampling and analysis confirmed that levels of lead contamination range from 1,500 to 21,000 ppm and exceed the TCLP. These surface soils may migrate due to weather events such as rain, wind, and flooding.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action in this memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment. The response actions set forth in this Action Memorandum are necessary to protect the public health or welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The objective of this action will be to remove and dispose of material from the sludge storage areas, and to remove drums containing hazardous substances. If buried drums containing hazardous substances are encountered, they will be removed and disposed of. For purposes of calculating costs associated with this removal action it is assumed that no more than 100 buried drums exist at this site. If, during implementation of this removal action, it is discovered that hundreds or thousands of buried drums exist, this action memorandum will be amended accordingly. Part of this removal action will also treat and remove lead-contaminated soil until it passes the TCLP. A cap and protective cover will be placed on areas where the concentration of lead exceeds 3,000 ppm. The barium-contaminated ash will also be properly disposed of.

Soil excavations will not exceed four feet, unless removing buried drums. In such an event, contaminated areas at depths greater than four feet will be covered with construction fencing, mapped, and ensured to pass any applicable TCLP tests (by treatment if necessary) before backfilling. The purpose of marking areas where excavation ceased is to warn utility and construction workers of possible contamination at depth.

2. Contribution to Remedial Performance

The proposed actions will lead to the reduction or elimination of the health threat posed by the hazardous substances present on-site. No future removal or remedial actions will be required if this proposed removal action is completed.

3. Alternative Technologies

There are no alternative technologies for this site.

4. Applicable or Relevant and Appropriate Requirements

The NCP at 40 C.F.R. § 300.415(i) requires that removal actions shall, to the extent practicable, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (ARARs) under federal environmental, state environmental, or facility-citing laws. The following site-specific ARARs have been identified for the actions proposed in this memorandum:

RCRA requirements concerning manifesting, waste packaging, labeling, waste analysis and notification to treatment, storage and disposal facilities subject to land disposal restrictions (40 C.F.R. §§ 262.20 - 262.23 and §§ 262.30 - 262.32, and 40 C.F.R. § 268.7).

RCRA requirements pertaining to on-site treatment, storage or disposal of hazardous wastes (40 C.F.R. Parts 264, 265 and 268).

Any treatment and off-site disposal of site derived waste, and contaminated soil, liquid, or debris will be in accordance with RCRA and the CERCLA Off-Site Rule, promulgated pursuant to CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and formally entitled "Amendment to the National Oil and Hazardous Substances Pollution Contingency Plan; Procedures for Planning and Implementing Off-Site Response Action: Final Rule." 58 Fed. Reg. 49200 (September 22, 1993), codified at 40 C.F.R. § 300.440.

The requirements of the Hazardous Materials Transportation Act, 49 U.S.C. §§ 801-1813, further defined at 49 C.F.R. Parts 171-179.

The RCRA standards applicable to transporters of hazardous wastes found at 40 C.F.R. Part 263.

Additionally, the following site-specific items to be considered have been identified for the actions proposed in this memorandum:

Soil clean-up levels for arsenic, mercury, PAHs, and PCE will be set at the RSK levels. Clean-up levels for lead will be set at 3,000 ppm. These site-specific clean-up levels were based on the site's industrial land-use zoning of heavy industrial.

5. Project Schedule

The Region is prepared to initiate the response action proposed in this Action Memorandum following the approval of this Action Memorandum. On-site activities will last approximately five months.

B. Estimated Costs

Extramural Costs

Removal Allowance	$1,565,000
Start Contractor	$ 120,000
Analytical Services	$ 10,000
Contingency 10%	$ 170,000
Total Extramural	$1,865,000

Intramural Costs

Direct	$ 45,000
Indirect	$ 80,000
Total Intramural	$ 125,000
Total Project Costs	**$1,990,000**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action will increase public health risks to the nearby population through prolonged potential exposure to hazardous substances. Contaminated materials remaining on-site will continue to pose a direct contact threat and threat of off-site migration.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues for this removal action.

VIII. ENFORCEMENT

See Enforcement Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Container Recycling Site, located in Kansas City, Kansas. This action was developed in accordance with CERCLA as amended by the Superfund Amendments and Reauthorization Act of 1986, and is not inconsistent with the NCP.

Conditions at the site meet the NCP criteria for a removal action set forth in 40 C.F.R. § 300.415(b)(2) and your approval of the proposed removal action is recommended. The total project ceiling, if approved, will be $1,990,000. Of this, an estimated $1,865,000 comes from the Regional Removal Allowance.

Michael J. Sanderson, Director
Superfund Division

9/29/99
Date

Attachments

Figure 1: Site Location Map
Figure 2: Site Map